



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|------------------------|---------------------|------------------|
| 10/529,693 | 12/22/2005 | Leif Brunstrom | SSTRP0102US | 2025 |
| 58342 7590 06/05/2009 WARREN A. SKLAR (SOER) RENNER, OTTO, BOISSELLE & SKLAR, LLP 1621 EUCLID AVENUE 19TH FLOOR CLEVELAND, OH 44115 | | | | |
| EXAMINER HERNANDEZ, NELSON D | | | | |
| ART UNIT 2622 | | PAPER NUMBER | | |
| MAIL DATE 06/05/2009 | | DELIVERY MODE PAPER | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/529,693

Applicant(s)

BRUNSTROM ET AL.

Examiner

Nelson D. Hernández Hernández

Art Unit

2622

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Response to Amendment

1. The Examiner acknowledges the amended claims filed on March 2, 2009.

Claims 10-15 have been cancelled.

Response to Arguments

2. Applicant's arguments, see pages 5-8, filed March 2, 2009, with respect to the rejections of claims 1-9 under 35 USC 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, new grounds of rejection are made in view of newly found prior art.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al., US 2003/0155216 A1 in view of Mihara et al., US Patent 7,436,599 B2.**

Regarding claim 1, Park et al. discloses a portable communication apparatus
(See *figs. 1-3*) comprising:

a first housing portion (*See fig. 3: 20*) and a second housing portion (*See fig. 3: 10*),

a rotary support member (*hinge arm 22 as shown in fig. 3*) rotatably connecting the first housing portion and the second housing portion (*Note that the hinge arm 22 is integral with the first housing portion and connects to the hinge arms 11 of the second housing portion 10 as shown in figs. 2 and 3. See page 1, ¶ 0019*),

an image producing apparatus (*Park et al. discloses the use of a camera to capture images through a camera lens assembly 26 as shown in figs. 2 and 3. See pages 1-2, ¶ 0020*),

an optical input (*camera lens assembly 26 as shown in figs. 2 and 3. See page 1, ¶ 0020*) for the image producing apparatus located in the support member (*Note that the camera lens assembly 26 is located on the hinge arm 22 and since the hinge arm 22 is formed integral with the first housing portion the camera can be operated even when the folder is in the close position. See pages 1-2, ¶ 0020*), characterized in that

the image producing apparatus is located in the rotary support member (*Park et al. discloses that the camera is located in the hinge arm 22. See pages 1-2, ¶ 0019-0020*).

Park et al. does not explicitly disclose that the image producing apparatus is located in the first housing portion or the second housing portion of the portable communication apparatus, and an optical arrangement extends an optical path of the image producing apparatus from the first housing portion or the second housing portion to the optical input located in the rotary support member.

However, Mihara et al. discloses a portable communication apparatus (*See figs. 35(a)-35(c)*) comprising an image producing apparatus (*See fig. 35(c): 162*), an optical unit (*Prism P as shown in fig. 35(c)*) for directing light to the image producing apparatus located in the body of the cell phone, characterized in that the image producing apparatus is located in the body of said cell phone (*See fig. 35(c)*), and an optical arrangement (*See fig. 35(c)*) extends an optical path of the image producing apparatus from a particular location of the body of said portable communication apparatus to a second location along the length of the body of said portable communication apparatus (*See fig. 35(c); page 35, line 55 – page 36, line 23*). It is noted from the Mihara et al. teaching, that by using this arrangement where the incoming light is bent or reflected using the prism to direct said light to the image producing apparatus would allow inclusion of other optical elements such as a zoom lens that would allow the user to magnify the images being captured, thus obtaining images with high magnification and allowing excellent image-formation capability even on rear focusing while allowing the portable communication apparatus to have a reduce thickness (*See Mihara et al., col. 36, lines 32-36*)

Although the teaching in Mihara et al. does not explicitly disclose that the telephone is a foldable type telephone where the lens is located at the hinge of said telephone as shown in the Park et al. reference, after acknowledging the advantages of the optical arrangement in Mihara et al. where the main lens is located at a particular location and the sensor is located at a different location along the length of the body of the camera where the optical path of the main lens and the sensor are perpendicular in

order to allow a considerable size reduction of the image pick-up apparatus and would also allow including more optical elements to focus the image to be captured, one of an ordinary skill in the art would find obvious at the time the invention was made to modify the image input unit in the Park et al. teaches where the hinge is formed integral with the first housing portion to that the image producing apparatus would operate even in a folded position, to have the image producing apparatus located in the first housing portion or in the second housing portion of the portable communication apparatus, and to have the optical arrangement to extend an optical path of the image producing apparatus from the first housing portion or the second housing portion to the optical input located in the rotary support member noting the fact that the image producing apparatus is located in a hinge that is an integral part of the first housing portion and would only require to make the arrangement of the image producing apparatus and the other optics (i.e. prism and other lenses along the optical path) to be located along the body of the first housing portion while maintaining the operation intended in the Park et al teaching. The motivation to do so would have been to allow inclusion of other optical elements such as a zoom lens that would allow the user to magnify the images being captured, thus obtaining images with high magnification and allowing excellent image-formation capability even on rear focusing while allowing the portable communication apparatus to have a reduce thickness (*See Mihara et al., col. 36, lines 32-36*)

Regarding claim 2, limitations have been discussed and analyzed in claim 1.

Regarding claim 3, the combined teaching of Park et al. in view of Mihara et al. as discussed and analyzed in claim 3 teach that the optical arrangement comprises a mirror (*Mihara et al. further teaches as an alternative to use a mirror (Fig. 16: M) in another embodiment. Col. 29, lines 20-28*). Grounds for rejecting claim 1 apply here.

Regarding claim 4, the combined teaching of Park et al. in view of Mihara et al. fails to teach that the optical arrangement comprises a light guide. However, Official Notice is taken that the concept of using a light guide such as a fiber optic to direct light of an image to a sensor is well known in the art, an example of that is in the use of flexible cameras such as endoscopes. Therefore, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to modify the prism or mirror as taught in Mihara et al. with a light guide as an alternative way to direct the light to the image sensor by using an optical element that would also allow a considerable reduction of the imaging device.

Regarding claim 5, the combined teaching of Park et al. in view of Mihara et al. as discussed and analyzed in claim 1 further teaches that the optical input is aimed in a first direction when the communication apparatus is in an open state, and in a second direction when the communication apparatus is in a closed state (*Park et al. discloses that the hinge arm 22 is integral with the first housing portion and connects to the hinge arms 11 of the second housing portion 10 and the camera lens assembly is located in*

said hinge arm so that the camera can be operated even when the folder is in the close position. See pages 1-2, ¶ 0020). Grounds for rejecting claim 1 apply here.

Regarding claim 6, the combined teaching of Park et al. in view of Mihara et al. as discussed and analyzed in claim 1 further teaches that the image producing apparatus is a video camera (*Park et al. discloses that the camera is user for taking photograph of an object or performing visual communication (See page 1, ¶ 0019). This teaches that the image producing apparatus is a video camera. Furthermore, Mihara et al. discloses the invention for either digital or video cameras (See col. 36, lines 32-36)).* Grounds for rejecting claim 1 apply here.

Regarding claim 7, the combined teaching of Park et al. in view of Mihara et al. as discussed and analyzed in claim 1 further teaches that the image producing apparatus is a still camera (*Park et al. discloses that the camera is user for taking photograph of an object or performing visual communication (See page 1, ¶ 0019). Furthermore, Mihara et al. discloses the invention for either digital or video cameras (See col. 36, lines 32-36)).* Grounds for rejecting claim 1 apply here.

Regarding claim 8, the combined teaching of Park et al. in view of Mihara et al. as discussed and analyzed in claim 1 further teaches that the portable communication apparatus is a mobile telephone (*See Park et al., figs. 1-3; page 1, ¶ 0017. See also*

Mihara et al., *figs. 35(a)-35(c)*; *col. 35, line 54 – col. 36, line 37*). Grounds for rejecting claim 1 apply here.

Regarding claim 9, the combined teaching of Park et al. in view of Mihara et al. as discussed and analyzed in claim 1 further teaches that the connection between the first housing portion and the rotary support member is fixed (*Note that the hinge arm 22 is integral with the first housing portion and connects to the hinge arms 11 of the second housing portion 10 as shown in figs. 2 and 3. See page 1, ¶ 0019*), wherein the optical input of the image producing apparatus is rotatably fixed relative to the first housing portion (*Park et al. discloses that the hinge arm 22 is integral with the first housing portion and connects to the hinge arms 11 of the second housing portion 10 and the camera lens assembly is located in said hinge arm so that the camera can be operated even when the folder is in the close position. See pages 1-2, ¶ 0020. This teaches that the optical input of the image producing apparatus is rotatably fixed relative to the first housing portion since the hinge arm 22 is fixed to the first housing portion, so when the first housing portion is moved, the lens of the camera is also move relative to the first housing portion (the optical input would point in a direction perpendicular to the first housing portion)*). Grounds for rejecting claim 1 apply here.

Conclusion

5. Because new grounds of rejection have been made to reject **claims 1-9**, this Office Action is made **NON FINAL**.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson D. Hernández Hernández whose telephone number is (571)272-7311. The examiner can normally be reached on 9:00 A.M. to 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lin Ye/
Supervisory Patent Examiner, Art Unit 2622

NDHH
May 29, 2009